

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-12. (Cancelled).

Claim 13. (New) A fluorine gas generator for generating fluorine gas by electrolyzing an electrolyte comprising a hydrogen fluoride-containing mixed molten salt, which generator is equipped with:

a hydrogen fluoride gas feed line, one end of which is connected to a hydrogen fluoride gas supply source and the other end of which is connected to a hydrogen fluoride gas inlet disposed in an electrolyte in an electrolytic bath, for feeding hydrogen fluoride gas into the electrolyte,

a first automatic valve disposed on said hydrogen fluoride gas feed line,

an inert gas feed line connected to a downstream side from said first automatic valve on said hydrogen fluoride gas feed line,

a liquid level detector for detecting the liquid surface level of the electrolyte, wherein the first automatic valve is configured to open to start feed of hydrogen fluoride gas when the liquid level detector detects that the liquid surface level of the electrolyte is at or lower than a predetermined level, and to close to stop hydrogen fluoride gas feeding when the liquid level detector detects that the liquid surface level of the electrolyte is at or higher than a predetermined level, and

an inert gas substitution means for feeding an inert gas from the inert gas feed line to the hydrogen fluoride gas feed line when the first automatic valve is closed.

Claim 14. (New) The fluorine gas generator according to claim 13, wherein said first automatic valve is located above the predetermined level of the liquid surface level of the electrolyte and the inert gas feed line is connected to said hydrogen fluoride gas feed line at a location above the predetermined level of the liquid surface level of the electrolyte.

Claim 15. (New) The fluorine gas generator according to claim 13, further comprising a second automatic valve disposed on said inert gas feed line to feed the inert gas into said inert gas feed line on the side downstream from said first automatic valve on said hydrogen fluoride gas feed line.

Claim 16. (New) The fluorine gas generator according to claim 13, wherein said inert gas feed line is provided with an inert gas storage tank for storing the inert gas to be fed.

Claim 17. (New) A fluorine gas generator for generating fluorine gas by electrolyzing an electrolyte comprising a hydrogen fluoride-containing mixed molten salt, which generator is equipped with:

a hydrogen fluoride gas feed line, one end of which is connected to a hydrogen fluoride gas supply source and the other end of which is connected to a hydrogen fluoride gas inlet disposed in an electrolyte in an electrolytic bath, for feeding hydrogen fluoride gas into the electrolyte,

a first automatic valve disposed on said hydrogen fluoride gas feed line, wherein in the event of an emergency stop of the fluorine gas generator, the first automatic valve is configured to close to stop hydrogen fluoride gas feeding,

an inert gas feed line connected to a downstream side from said first automatic valve on said hydrogen fluoride gas feed line, and

an inert gas substitution means for feeding an inert gas from the inert gas feed line to the hydrogen fluoride gas feed line when the first automatic valve is closed.

Claim 18. (New) The fluorine gas generator according to claim 17, wherein said first automatic valve is located above a maximum liquid surface level of the electrolyte and the inert gas feed line is connected to said hydrogen fluoride gas feed line at a location above the maximum liquid surface level of the electrolyte.

Claim 19. (New) The fluorine gas generator according to claim 17, further comprising a second automatic valve disposed on said inert gas feed line to feed the inert gas into said inert gas feed line on the side downstream from said first automatic valve on said hydrogen fluoride gas feed line.

Claim 20. (New) The fluorine gas generator according to claim 17, wherein said inert gas feed line is provided with an inert gas storage tank for storing the inert gas to be fed.

Claim 21. (New) A method of controlling fluorine gas generation in a fluorine gas generator by electrolyzing an electrolyte comprising a hydrogen fluoride-containing mixed molten salt, wherein the fluorine gas generator comprises a hydrogen fluoride gas feed line, one end of which is connected to a hydrogen fluoride gas supply source and the other end of which is connected to a hydrogen fluoride gas inlet disposed in an electrolyte in an electrolytic bath, for feeding hydrogen fluoride gas into the electrolyte, a first automatic valve disposed on said hydrogen fluoride gas feed line, an inert gas feed line connected to a downstream side from said first automatic valve on said hydrogen fluoride gas feed line, a liquid level detector for detecting the liquid surface level of the electrolyte, wherein the first

automatic valve is configured to open to start feed of hydrogen fluoride gas when the liquid level detector detects that the liquid surface level of the electrolyte is at or lower than a predetermined level, and to close to stop hydrogen fluoride gas feeding when the liquid level detector detects that the liquid surface level of the electrolyte is at or higher than a predetermined level, and an inert gas substitution means for feeding an inert gas from the inert gas feed line to the hydrogen fluoride gas feed line when the first automatic valve is closed, the method comprising the steps of:

detecting a liquid surface level of the electrolyte by the liquid level detector;

closing the first automatic valve to stop hydrogen fluoride gas feeding when the liquid level detector detects that the liquid surface level of the electrolyte is at or higher than a predetermined level;

feeding an inert gas from the inert gas feed line to the hydrogen fluoride gas feed line when a stoppage of hydrogen fluoride gas feeding is detected.

Claim 22. (New) A method of controlling fluorine gas generation in a fluorine gas generator by electrolyzing an electrolyte comprising a hydrogen fluoride-containing mixed molten salt, wherein the fluorine gas generator comprises a hydrogen fluoride gas feed line, one end of which is connected to a hydrogen fluoride gas supply source and the other end of which is connected to a hydrogen fluoride gas inlet disposed in an electrolyte in an electrolytic bath, for feeding hydrogen fluoride gas into the electrolyte, a first automatic valve disposed on said hydrogen fluoride gas feed line, wherein in the event of an emergency stop of the fluorine gas generator, the first automatic valve is configured to close to stop hydrogen fluoride gas feeding, an inert gas feed line connected to a downstream side from said first automatic valve on said hydrogen fluoride gas feed line, and an inert gas substitution means

for feeding an inert gas from the inert gas feed line to the hydrogen fluoride gas feed line

when the first automatic valve is closed, the method comprising the steps of:

stopping the fluorine gas generator in the event of an emergency;

closing the first automatic valve to stop hydrogen fluoride gas feeding in the event of
an emergency stop;

feeding an inert gas from the inert gas feed line to the hydrogen fluoride gas feed line
when a stoppage of hydrogen fluoride gas feeding is detected.